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IMAGINE





from Commodore

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BOOTH 817, EAST HALL

COMMODORE LAUNCHES CDTV INTERACTIVE MULTIMEDIA™ PLAYER; WORLDWIDE INTRODUCTION SLATED FOR FIRST QUARTER 1991

LAS VEGAS, January 9, 1991 -- Commodore International today announced the worldwide launch of the CDTV™ player, the industry's first consumer Interactive Multimedia player at Winter CES. The new player is the synthesis of consumer electronics and advanced microchip technologies, and represents a significant advance in the evolution of consumer electronics products.

The CDTV player is planned to be available through quality audio/video specialty retailers, select upscale retail chains, department stores and select "software" outlets in the United States and United Kingdom; with Canada and Europe soon thereafter.

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1 2 0 0 W I L S O N D R I V E WEST CHESTER, PA 19380 (2 1 5) 4 3 1 - 9 1 0 0 In the U.S., the CDTV player is planned to be introduced in New York, Los Angeles, Chicago, San Francisco, Dallas and Denver through such major retailers as Montgomery Ward, Video Concepts, McDuff, and Software Etc. In the U.K., the CDTV player is planned to be introduced through Dixons. The CDTV Interactive Multimedia introduction is scheduled for the first quarter of 1991.

According to Nolan Bushnell, general manager of Commodore's Interactive Consumer Products division, CDTV Interactive Multimedia represents a breakthrough on two fronts.

"The CDTV player is a smart, easy-to-use, next-generation home component which offers computing power without computer complexity," says Bushnell. "CDTV Interactive Multimedia is also the next generation in compact disc development, combining audio, graphics, video and text to create true multimedia.

CDTV Interactive Multimedia will change the way people learn and are entertained. It's the real new media of the 1990s."

The player connects to a television set and home audio system to become an interactive entertainment, information and education center. A simple hand-held infrared remote control provides access to an entire library of multimedia educational, entertainment, information and reference titles.

It is expected that there will be a wide range of peripheral products available for the CDTV player as well. These products include an optional infrared computer keyboard, brick/trackball with joystick ports, video genlocking card, and a 3 1/2-inch floppy disk drive. The CDTV player also plays conventional CD-Audio discs at 8-times oversampling 102dB S/N and plays the record industry's new format, CD + Graphics [CD+G].

"CDTV Interactive Multimedia changes television from a passive to an active medium," observes Bushnell. "During the 1980s, home video and laserdiscs began to break the monotony of one-way television. These media offer consumers more choice but are essentially passive. CDTV titles allow users to customize their access to the information on the disc, thus gaining more control. By being more actively involved in the title, viewers will get more value from television."

Commodore expects to have a minimum of 30 CDTV multimedia titles available at the time of launch, with more than a hundred planned by the end of the year. The CDTV library will consist of titles developed by some of the world's leading entertainment and reference companies, including Guinness and LucasFilm, among others.

The initial roster of titles underscores the launch of a new media for the 1990s. The planned titles will consist of interactive reference materials such as the <u>World Vista Atlas</u>, the fully illustrated <u>American Heritage Encyclopedic Dictionary</u> and others.

COMMODORE LAUNCHES CDTV INTERACTIVE MULTIMEDIA PLAYER 4-4-4-4

Interactive versions of children's classics such as <u>Cinderella</u> and the <u>Tale of Peter Rabbit</u> highlight a full selection of unique educational learning titles designed to help children learn more easily and have fun.

Titles highlighting leisure activities such as gardening, cooking and sports will comprise a major share of the CDTV library. Titles for business, self-improvement and adventure are planned. Electronic games will be significantly more sophisticated in game play, sound and graphics than on any current home computer or video game format.

"CDTV Interactive Multimedia represents a dramatic shift in the way we receive and use information, are educated and entertained," said Bushnell. "If we can change the world through information, then this is the vehicle to do it."

Commodore International Limited, through its worldwide operations, is one of the world's leading producers of computer-based consumer and business products.

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COMMODORE INTERNATIONAL LIMITED

Commodore International Limited, through its subsidiaries, is one of the world's leading personal computer companies in both the professional and consumer markets. Over the last six years, the company has been second only to IBM in the total cumulative number of microcomputers shipped, according to Dataquest. Commodore also manufactures and markets electronic information-entertainment products for the home.

The company is fully-integrated with a semiconductor foundry in the U.S. and manufacturing facilities in Hong Kong, the U.S. and Germany. Products are sold in 43 countries with marketing focused on Europe (75% of sales), North America (18%) and Asia/Australia (7%). With nearly \$900 million in worldwide revenues and more than 3,000 employees, Commodore is a recognized brand name in many countries in both the consumer and professional sectors.

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Commodore has four product groups: Amiga multimedia computers (53% of sales); PC compatible computers (29%); C64 computers (18%); and CDTV interactive multimedia players. The company is using these products to position itself in five key markets:

- 1. Consumer PCs: The growing consumer market for entry-level PCs for entertainment, education and home/office productivity. Products include the Motorola 68000-based Amiga 500, the C64 and C64 Games System and XT and 80286 compatibles. For three years in a row, the Amiga 500 has been named "Home Computer of the Year" by European journalists in the leading computer publication Chip.
- 2. Professional PCs: The growing market in business for cost-effective PC-compatibles, particularly in Europe. As of the first half of 1990, Commodore held the fifth place in unit volume in the European professional PC market. Products offered include a growing range of Intel 80286, 80386SX, 80386DX and 80486DX laptops, slimlines, desktops and towers.
- 3. Open Systems: The growing market in business and higher education for cost-effective Unix workstations. Byte magazine said Commodore's 68030-based Amiga 3000UX, which runs ATT's Unix with the X Window Open Look interface, "greatly outperforms the equivalent NeXt and Mac..."

- 4. Multimedia PCs: The emerging market in business, government and eductaion for PCs that can multitask text, graphics, animation, audio and video in real time. According to Sheer & Chaskelson Research, the 68000- and 68030-based Amiga 2000 and 3000 series microcomputers are number one in unit volume in seven major categories in the U.S. professional videographics market.
- 5. Interactive Multimedia Players: The potential market in consumer electronics for compact disc-based, multimedia players. According to The Wall Street Journal, Commodore's CDTV Player "makes the company an early entrant into a market that many computer companies consider to be vast."

Commodore has a long history of introducing innovative products for consumers and professionals. The company was founded in Toronto in 1958 as a typewriter sales and repair company. It became vertically integrated with the acquisition of a German typewriter manufacturer, later providing the base for Commodore's European operations. By the early 1960s, the company was selling a wide range of equipment, including adding machines. This led Commodore in 1969 to introduce one of the first handheld calculators and in 1975 to acquire chip maker MOS Technology, Inc. of Norristown, Pa. This unit continues today to make key chips for the company.

Commodore's expertise in semiconductors led the company in 1977 to introduce the first personal computer, the Commodore PET, for Personal Electronic Totalizer, with a list price under \$1,000, an MOS-designed 6502 microprocessor and 8K RAM. This led the company to introduce the first home computer, the VIC 20 for under \$300, in 1980 and the Commodore 64 in 1982. By year end, the 64K machine had passed the Apple II in monthly unit volume. Repackaged in 1987 as the C64, the unit continues today as the most popular computer ever sold with more than 11 million total units shipped.

In search of new technology, Commodore acquired Amiga Computer, Inc. in 1984 and introduced the breakthrough Amiga 1000 the next year. Based on a special three-chip set, the 1000 was the first multitasking, multimedia computer with a mouse-driven color graphic user interface. Business Week called it "The Porsche of personal computers." The line has since been expanded to include the Amiga 500 for consumers to the Amiga 3000 for professionals. In November 1990, Commodore announced that it had sold its two millionth Amiga a little more than a year after it had sold the first million.

While Commodore was introducing the Amiga to the U.S., the company became one of the first to develop IBM compatibles, initially for the European market. Commodore's first product in 1985 was the PClO, later marketed as the "Clone Killer" in the U.S., with a suggested list under \$2,000, including monitor, at a time when IBM PCs were selling for \$5,000.

Commodore's expertise in multimedia technology in 1990 led the company to develop CDTV Interactive Multimedia[™] and the CDTV[™] player — the first interactive multimedia player, able to run a new generation of compact disc-based education, information, reference and entertainment applications. Key to CDTV is an innovative blend of CD-ROM and Motorola 68000 and Amiga multimedia technology. The Software Publishers Association called it one "of the first truly innovative . . . products in years." In December 1990, Popular Science named the CDTV player one of 1990's "Best of What's New" products for the home.

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TECHNICAL SPECIFICATIONS

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COMMODORE CDTV TECHNICAL SPECIFICATIONS

CENTRAL PROCESSING UNIT:

- MC68000 (Motorola)

16/32-bit main CPU

CPU SPEED:

- 7.15909 MHz (NTSC)

- 7.09379 MHz (PAL)

MEMORY:

- 1Mb (megabyte) chip RAM

- 2K non-volatile RAM

reserved for system (clock,

prefs, etc.)

- 512K ROM

INTERNAL SLOTS:

 Intelligent video slot (for optional genlock, RF board, etc.) 15 pin edge connector

- DMA slot - for SCII, LAN,

etc.

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TECHNICAL SPECIFICATIONS 2-2-2-2-2

VIDEO OUTPUTS:

- Analog RGB, Digital RGB (DB-23 connector)
- Composite video NTSC or PAL (RCA connector)
- Component video Y-C
 (S connector type for S-VHS and Hi8)
- RF Modulated (F connector)
- Optional genlock
 capabilities via plug-in
 module. Three-mode (CD,
 video source or mixed)
 under software control

VIDEO DISPLAY (GENERAL):

- 400 lines/vertical
 frequency 60Hz (NTSC)
- 512 lines/vertical
 frequency 50Hz (PAL)
- Maximum 1Mb video memory
 (chip memory)
- Palette for 4096 colors

TEXT MODES:

- 80 characters/25 lines
- 60 characters/25 lines
- Various font sizes and types selectable
- Screen colors-user-definable

TECHNICAL SPECIFICATIONS 3-3-3-3-3

CD-ROM DRIVE SPECS:

Sony/Philips type CD-ROM standard mode 1, mode 2

-Data readout from disc: 153 KBytes/sec (mode 1)

171 KBytes/sec (mode 2)

2 Megabytes/sec (burst)

-Average access time: 0.5 sec
-Maximum access time: 0.8 sec

-Soft read error: Less than 10e-9
-Hard read error: Less than 10e-12
-Seek error: Less than 10e-6

-Commands CD-ROM, CD-Audio, CD+G

-MTBF: 10,000 P.O.H.

-Standard supported: ISO-9660

-Data Capacity: 550 MegaBytes (approx.)

(about 700 Amiga floppy disks)

CD-AUDIO SPECS:

-8X oversampling

-Audio output: External 1.4 VRMS, 10K OHM

-Frequency response: 20-20KHz

-Signal/Noise: -102dB (Typical)
-Channel Separation: -92dB (Typical)
-Harmonic Distortion: 0.02% at 1KHz

-Maximum audio capacity: About 14 hours - AM quality
-Sample rate: Variable from CD-Audio rate

(44 KHz) to 6KHz

-Dual 16-bit D/A converter plus 10-bit of attenuation

TECHNICAL SPECIFICATIONS 4-4-4-4

REAR PORTS:

- Centronics Parallel interface
- RS-232 Serial interface
- External floppy disk drive interface (Amiga floppy disk drive compatible)
- Hardwired alternative to IR for keyboard, mouse, joystick
- 2 audio output ports (RCA type plug) requires external audio amplifier
- MIDI In/Out

FRONT PORT:

- Stereo headphone jack
- Port for optional personal RAM card (up to 64K)

FRONT PANEL DISPLAY:

- Fluorescent (white characters on black)
- Time, track and volume level
- Clock remains lit when unit is turned off
- Display controllable by application

FRONT PANEL CONTROLS:

- Power On/Off
- Headphone Volume Up/Down
- Play/Pause
- Stop
- Forward/Reverse Scan/Skip
- CDTV
- Reset

OPERATING SYSTEM:

- Amiga Kickstart 1.3 in ROM
- ISO 9660 File System Handler

IR (INFRARED) REMOTE UNIT SPECS:

- Proprietary high-speed IR signal
- Power supplied by 2 AA batteries
- Numeric keys plus Shift key (17 total)
- Up, Down, Left, Right movement button
- Two select keys
- Reverse, Forward,Play/Pause, HeadphoneVolume and Stop keys
- Power On/Off

OPTIONAL ACCESSORIES:

- External floppy disk drive
 - Trackball (infrared)
 - Joystick (infrared)
 - MIDI In/Out
 - Personal RAM or ROM card
 - Genlock
 - Keyboard
 - Two player IR interface
 - Modem
 - Printer

Specifications subject to change without notice.

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IRVING GOULD

Irving Gould is chairman and chief executive officer,
Commodore International Limited. Gould is a graduate of the
University of Toronto with a B.A. degree in Honour Law. After
graduation, he served four years with the Royal Canadian Air
Force (RCAF). Following military duty he was involved with
several private companies.

Gould became chairman of Commodore International Limited in 1965. In 1987, he assumed operating control, playing an integral role as both chairman and CEO in the rebuilding of Commodore into a nearly \$1 billion international corporation. He is headquartered in Nassau.

Commodore International Limited, through its subsidiaries, is a fully integrated, independent manufacturer and marketer of business and consumer products. Manufacturing facilities are located in North America, Europe and the Far East. Marketing is worldwide. Research is devoted to the development of innovative, competitive, superior-performance products.

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GAIL WELLINGTON

As director of special projects, Commodore International, Ltd., Wellington reports directly to Mehdi Ali, president of the parent corporation. She has been actively working on the development of new hardware products and related applications software.

Wellington joined Commodore in June 1981, to write user manuals for applications software. Within a year she was made editor and then software manager for Commodore's UK subsidiary. She later transferred to Commodore Electronics Trade Company, also based in the UK.

In April of 1985 Wellington took a six-month assignment to assist in the launch of Amiga. Based in California, she was the liaison between the development team in Los Gatos and the Commodore Sales/Marketing people on the East Coast.

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1 2 0 0 W I L S O N D R I V E WEST CHESTER, PA 19380 Upon returning to Europe, Wellington was instrumental in the launch of Amiga: She organized the first Amiga European Developers Conference and coordinated the activities of the country support managers, product introduction and developer support programs.

In October 1986 she returned to the U.S. to take the position of worldwide Amiga product manager. One year later Wellington was promoted to general manager, Commodore Applications and Technical Support. In this position she had responsibility for all worldwide developer activities. Her objective was to ensure the successful sale of Commodore proprietary products by creating the availability of quality applications software and third-party hardware. This group, known as CATS, consists of technical, administrative, marketing and evangelical staff.

Wellington studied mechanical engineering at Northeastern University in Boston, where she received her BS degree. Prior to joining Commodore, Wellington held positions with Raytheon, Adamation and Honeywell.

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For further information:

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PRELIMINARY CDTV TITLES LAUNCH, 1991

<u>Title*</u> <u>Developer</u>

HOME REFERENCE

King James Bible	Animated Pixels
World Vista Atlas	Applied Optical Media
The American Heritage Encyclopedic Dictionary	Xiphias
Dr. Wellman, Family Medical Advisor	Digita
Time Table of Science & Innovation	Xiphias
Time Table of Business & Politics	Xiphias
Illustrated Works of Shakespeare	Animated Pixels
Japan World	TopClass Tech
Advanced Military Systems	Dominion

CHILDRENS' CLASSICS

Cinderella	Discis
Tale of Peter Rabbit	Discis
Scary Poems for Rotten Kids	Discis

CHILDRENS' STORIES

A Long Hard Day at the Ranch	Discis
Moving Gives Me a Stomach Ache	Discis
The Paper Bag Princess	Discis

CHILDRENS' FUN

Animated Coloring Book	Gold Disk
All Dogs Go to Heaven (Electric Crayon)	Merit Software
Snoopy	The Edge

*Titles subject to change without notice.

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CDTV TITLES 2-2-2-2

Title*

Developer

LEISURE

Gardenfax - Gardenplants Gardenfax - Houseplants Silver Palate Cookbook Music Maker Intersearch Intersearch Xiphias Music Sales

EDUCATION

North Polar Expedition
Fun School (3 discs for different age ranges)
A Bun for Barney
Barney Bear Goes to School
McGee
Our House
Hallo Freunde! German for Beginners

Virgin Mastertronic Mandarin Multimedia Corp. Free Spirit Lawrence Productions Context Illiad

THINKING GAMES

Sherlock Holmes, Consulting Detective Battle Chess
Airwave Adventure -The Case of the Cautious Condor Defender of the Crown Classic Board Games
Many Roads to Murder
Murder Anyone?
Dominion

Icom Simulations Interplay Tiger Media

Cinemaware
Merit Software
Vent
Vent
Dominion

ADVENTURE AND ARCADE GAMES

Thexder
Excalibur
Space Quest III
Pacmania
Future Wars
Xenon II

Sierra-on-Line
Virgin Mastertronic
Sierra-on-Line
Domark
Interplay
Mirrorsoft

SIMULATION GAMES

Sim City Falcon

Maxis

Spectrum Holobyte

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FOR IMMEDIATE RELEASE APPLICATIONS

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GUINNESS, LUCASFILM AND OTHER TOP-NAME DEVELOPERS JOIN INTERNATIONAL CDTV™ APPLICATIONS DEVELOPMENT GROUP

LAS VEGAS, January 9, 1991 -- Commodore International today announced several exciting additional applications for its CDTV Interactive Multimedia™ format. These include works from developers and publishers such as LucasFilm, Guinness, Psygnosis, Cinemaware, Accolade and Music Sales.

The CDTV player harnesses the interactive capabilities of Commodore's advanced microchips with next-generation multimedia compact disc technology. The CDTV player is affordable and easy to use; the applications are accessed through a simple hand-held remote control.

These companies join some of the world's most prestigious development companies, including Spectrum Holobyte, Merit, Icom Simulations, Xiphias, Applied Optical Media, Virgin, Mirrorsoft, Tiger Media, Free Spirit, Interplay and Discis, all of which have CDTV titles in development.

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WEST CHESTER, PA 19380

The CDTV player, which is scheduled to be available for sale in selected markets in the United States and the United Kingdom in the first quarter of 1991, will be supported by educational, entertainment and reference titles. The suggested retail price of CDTV titles is expected to range from \$30 to \$100 (U.S.); the suggested retail price of the player will be \$999 (U.S.).

According to Nolan Bushnell, general manager of Commodore's Consumer Interactive Products division, CDTV inaugurates the 'library of the future,' a world of discovery on a shiny CD.

"We've dubbed this new product category 'interactive multimedia,'" said Bushnell. "Key to building this new media library is gaining the support of major application developers. We've taken a major step with today's announcement."

"If you've ever used <u>The Guinness Book of Records</u>, then <u>The Guinness CDTV Disc of Records</u> will knock your socks off," says Bushnell. "It's all there and more, much more. The 'book' has truly become multimedia. Text will be enriched with the addition of audio, video, still pictures and animation. The original print-based format of listings and illustrations has been reconceived for the new CDTV medium so that whole new sections including Tours, Guides and Games could be added."

Music Sales, Ltd. the music publisher, has created <u>Music</u>

<u>Maker</u>, featuring 17 exclusive digital audio arrangements of

well-known songs. Rather than just for listening, <u>Music Maker</u>

allows the user to participate by playing along even if he has

no musical training. The user can tap out the rhythm by remote

control or improvise at will without ever playing a wrong note.

Bushnell also identified several companies as meriting special

attention because they illustrate the breadth of support and

diversity of CDTV applications.

LucasFilm is scheduled to contribute three titles: Indiana Jones, Loom, and their new graphic adventure, The Secret of Monkey Island. Accolade is planning a special golf simulation featuring The Golfer of the Century, Jack Nicklaus, who will challenge CDTV golfers on one of his most famous courses, Muirfield Village, accurately recreated from 8000 digital photographs of the actual course. Cinemaware is producing a special pro football game, where play is augmented by real coaching opportunities. The user will be able to test offensive strategies against various types of defense, select players based on opponents' strengths and weaknesses and develop their own playbook. On gameday, TV Sports Football's realism will include sideline interviews, instant replay and cheering grounds. Psygnosis is developing enhanced graphic techniques for their arcade games superior to their Shadow of the Beast series.

Among the 30 titles already announced are the CDTV version of the popular <u>Silver Palate</u> cookbook series (to be retitled as <u>New Basics Electronic Cookbook</u> by Xiphias); Tiger Media's mystery game, <u>Airwave Adventure -- The Case of the Cautious</u> <u>Condor</u>; and the Discis series of children's readers including <u>Cinderella</u> and The Tale of Peter Rabbit.

The CDTV player represents a major advance in technology and capability over any commercially available entertainment format, combining audio, video, graphics and computer interactivity into a single, compact disc-based system. The storage capacity of the compact disc is enormous — the equivalent of more than 250,000 pages of typewritten text. This storage capacity enables developers to create applications which combine unparalleled levels of interactivity with vivid graphics and sound.

"CDTV Interactive Multimedia is more than a new product.

It represents a dramatic shift in the way we receive and use information, are educated and entertained," said Bushnell.

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SOPHISTICATED CAPABILITIES, SIMPLE ERGONOMICS
HIGHLIGHT COMMODORE CDTV INTERACTIVE MULTIMEDIA™ PLAYER

LAS VEGAS, January 9, 1991 -- Commodore's new CDTV™ player (Commodore Dynamic Total Vision™) brings advanced Interactive Multimedia performance in a package that is as simple to use as changing television channels with a remote control. The sleek, black player is similar in appearance to a conventional VCR or CD-Audio player, yet its multimedia capabilities offer consumers an unparalleled audio and video experience.

Commodore's CDTV player is the first consumer component to begin to realize the potential of multimedia compact disc technology.

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1 2 0 0 W I L S O N D R I V E WEST CHESTER, PA 19380 Compact discs have enormous storage capacity -- more than 550 Megabytes of digital data -- the equivalent of 250,000 pages of text. This data storage capacity enables program developers to design applications which are significantly more sophisticated, challenging and exciting than those available on any existing computer or home entertainment format.

Compact discs are "read-only memory" (CD-ROM) and are affordable to produce, making them extremely attractive to program developers. Commodore plans to have approximately 30 titles available for the CDTV player at launch, with 100 expected for Christmas 1991.

The heart of the Commodore CDTV player is its Motorola® 68000 16/32-bit central processing unit (CPU). The CDTV player has 1 Megabyte of RAM and utilizes proprietary Commodore graphics and audio processors.

This advanced technology is accessed through an ergonomically designed hand-held infrared remote control. The player has ports for infrared and wired peripherals. Optional keyboard, 3 1/2-inch floppy disk drive and brick/trackball with joystick ports are planned to be available, further enhancing the capabilities of this unique component.

The basic CDTV player also contains a front panel personal memory or "smart card" port, which allows consumers to save up to 512 Kilobytes of data.

Information can be saved on the smart card, allowing the player to be turned off without losing the saved information.

Applications such as games and personal finance projects can be resumed simply by re-inserting the card and continuing the application.

The CDTV player also plays conventional audio compact discs and the new record industry format, CD + Graphics [CD+G]. In the audio mode, the CDTV player is programmable, and features 8-times oversampling, 102dB S/N and dual 16-bit D/A converters. A front-panel 24-hour clock, stereo headphone jack and full-function fluorescent display provides time, track and volume information at a glance. An innovative on-screen panel provides such advanced features as 10-second sampling, looping, randomizing, CD+G and CD+MIDI.

The rear panel allows consumers to configure the CDTV player for specific applications. The player is compatible with most televisions or monitors, and accepts NTSC, Super-NTSC or PAL connectors. The player has a floppy disk drive interface with an optional SCSI interface. It also has a Serial and Parallel ports for a modem and printer. An additional port enables programs to be down-loaded to Composite/Hi8 and Super VHS video.

The CDTV player was developed with extensive consultation with some of the world's leading infrared control and CD-ROM disc drive manufacturers.

The player's "open architecture" design enables easy modification and upgrades. For example, Commodore plans to make the CDTV player compatible with the Moving Picture Expert Group [MPEG] full-screen, full-motion standard, once it is established.

Commodore International Limited, through its worldwide operations, is one of the world's leading producers of computer-based consumer and business products.

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FOR IMMEDIATE RELEASE
NEW MULTIMEDIA CATEGORY

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BOOTH 817, EAST HALL

COMMODORE LAUNCHES NEW INTERACTIVE MULTIMEDIA PRODUCT CATEGORY

LAS VEGAS, January 9, 1991 -- With the introduction of its CDTV Interactive Multimedia™ compact disc player, Commodore International launches an entirely new consumer electronics product category. CDTV™, which is an acronym for Commodore Dynamic Total Vision™, is the first of a new generation of consumer electronics products which combine conventional consumer electronics with advanced microchip technologies, in a revolutionary product that will change the way consumers are entertained, educated and informed.

"The introduction of CDTV Interactive Multimedia signals the next phase in the evolution of consumer electronics," said Nolan Bushnell, general manager of Commodore's Interactive Consumer Products division.

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1 2 0 0 W I L S O N D R I V E WEST CHESTER, PA 19380 (2 1 5) 4 3 1 - 9 1 0 0 "We believe that the merging of consumer electronics and advanced microchip technology will be the major product trend of this decade," said Bushnell. "The CDTV player will redefine the capabilities of consumer electronics products and provide consumers with an enhanced experience that is unavailable in any existing product."

According to Bushnell, CDTV Interactive Multimedia is a breakthrough on two fronts. "The CDTV player is a smart, easy-to-use, next-generation home component. It offers computing power without computer complexity.

"However, CDTV Interactive Multimedia is also the next generation in compact disc development. CDTV Multimedia discs combine audio, graphics, video and text to create a new medium. It's true multimedia," said Bushnell.

"CDTV Interactive Multimedia will truly change the way people learn, are entertained and educated -- it's the real new media of the '90s."

Commodore has made a substantial commitment to the CDTV player, and has engineered the product to meet the long-term needs of its users. The open architecture design of the CDTV player enables easy modification and upgrades. For example, Commodore plans to make the CDTV player compatible with the Moving Picture Expert Group [MPEG] full-screen, full-motion standard, once that standard is finalized. The player also supports all CD-Audio discs and the record industry's new format, CD + Graphics [CD+G] titles and is compatible with NTSC, Super-NTSC and PAL television sets, as well as monitors, making it a truly international product.

Commodore is providing its full support to a group of some of the world's most respected applications developers in order to build a comprehensive library of CDTV applications. They include LucasFilm, Guinness, Virgin, Xiphias, Tiger Media and Cinemaware. Commodore has announced its intention to establish CDTV as the standard interactive multimedia format.

According to Bushnell, there is considerable pent-up demand for a product with the capabilities of the CDTV player.

Consumers have been waiting for years for a product which has the functionality, flexibility and power of the CDTV player, "said Bushnell.

"The real point of difference between CDTV and conventional formats is the way CDTV Interactive Multimedia engages the user. Because using the CDTV player is so simple and the applications so powerful, the end-user becomes totally involved in the title. CDTV Interactive Multimedia transforms television from a passive medium to an active medium."

The launch of CDTV Interactive Multimedia also signals the introduction of a new category of application software. The enormous capacity of compact disc -- more than 550 Megabytes of data -- affords developers almost unlimited freedom to develop applications which are significantly more intriguing and exciting than current home computer or video game formats.

"The CDTV player and the Interactive Multimedia category that it is launching will create an entirely new software industry," said Bushnell.

COMMODORE LAUNCHES NEW INTERACTIVE MULTIMEDIA PRODUCT CATEGORY 4-4-4-4

"We anticipate that Interactive Multimedia titles will become a multi-billion dollar business within five years, rivaling the PC software and video game software industries," added Bushnell.

Commodore International Limited, through its worldwide operations, is one of the world's leading producers of computer-based consumer and business products.

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COMMODORE TO TARGET EARLY ADOPTERS, SELECTED MARKETS FOR CDTV™ LAUNCH

LAS VEGAS, January 9, 1991 -- Early adopters and selected upscale retailers in several major markets highlight Commodore's initial launch plans for its CDTV Interactive Multimedia compact disc player.

Nolan Bushnell, general manager of Commodore's Interactive Consumer Products division, expects the market penetration and acceptance of the CDTV player to follow a pattern similar to that of the VCR and CD player. Like early VCR and CD player consumers, Bushnell believes initial consumers of the CDTV product will be "early adopters" -- urban, well-educated and affluent. These consumers and their families are technologically proficient, own advanced audio/video entertainment systems, own or use personal computers and readily embrace new technologies with clear benefits.

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1 2 0 0 W I L S O N D R I V E WEST CHESTER, PA 19380 (2 1 5) 4 3 1 - 9 1 0 0 According to Bushnell, there is considerable pent-up demand for a product with the capabilities of the CDTV player.

"Consumers have been waiting for years for a product which has the functionality, flexibility and power of the CDTV player," said Bushnell. "The CDTV player has computing power without computer complexity, and high-quality audio and graphics that makes it uniquely appropriate to meet the consumer's education and entertainment needs."

Commodore will establish targeted distribution in selected major markets in the U.S. and U.K. upon introduction in the first quarter of 1991, then expand to additional markets in the U.S., Canada and Europe as the product becomes more established. Markets planned for initial U.S. launch include New York, Los Angeles, Chicago, San Francisco, Dallas and Denver.

"We have been very selective in establishing our distribution, which is why we chose retailers such as Montgomery Ward, Video Concepts, McDuff and Software Etc., for the U.S. launch and Dixons in the United Kingdom," said Bushnell. "These companies know what it takes to introduce new technology."

Commodore plans to support the CDTV player with a comprehensive advertising, public relations and promotional program designed to make consumers aware of the benefits of CDTV and to support retail sales.

"Educating consumers is our highest priority," said
Bushnell. "Commodore is committed to establishing Interactive
Multimedia as a new product category. We intend to nurture
this new market and bring our customers the most exciting and
advanced products."

In the U.S., Commodore plans to support the CDTV player with the industry-leading CommodoreExpress^m program. It features a toll-free customer "hot line" where Commodore-trained support professionals are on duty 24 hours a day, even weekends and holidays, to answer questions. The program also features a one-year limited warranty and free pickup and delivery in the U.S. by Federal Express® for warranty product repair.

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